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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,209	01/22/2004	William H. Hayman	117442	2738

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EXAMINER

ROYER, WILLIAM J

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,209

Applicant(s)

HAYMAN, WILLIAM H.

Examiner

William J. Royer

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>01222004; 08092005</u> . | 6) <input type="checkbox"/> Other: ____. |

Drawings

The drawings are objected to because of the following informalities:

In Figure 2, change reference numeral "16" to ---12 --- since reference numeral "12" was previously used in Figure 1 and on page 4 of the specification to indicate the direction of travel of the photoreceptor belt 10 not the surface of the photoreceptor belt.

In Figure 2, delete reference numeral --- 12 --- since reference numeral "12" has been used previously to indicate the travel direction of the photoreceptor belt.

In Figure 2, the use of reference numeral "38" to identify a development system is objected to because reference numeral "38" was previously used in Figure 1 to identify a second exposure station.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

In Figure 2, reference numerals "80" and "90" are shown, however, neither reference numeral appears to be identified in the specification.

In Figure 3, reference numeral "245" is shown, however, reference numeral "245" does not appear to be identified in the specification.

On page 1, line 10, change "the photoreceptor of the" to --- a photoreceptor of an ---.

On page 1, line 14, before "surface" insert --- photoconductive ---.

On page 1, line 24, after "sheet" insert --- or substrate ---.

On page 2, line 4, change "receiver" to --- photoreceptor ---.

On page 2, line 11, change "in the" to --- in a ---.

On page 2, line 14, change "magnetic brush" to --- donor ---.

On page 2, line 15, change "donor" to --- conductive ---.

On page 2, line 15, change "the field" to --- a field ---.

On page 2, line 16, change "The" to --- A ---.

On page 2, line 16, delete --- then ---.

On page 2, lines 18 and 19, change "ac" to --- AC ---.

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On page 2, line 18, after "donor" insert --- roll ---.

On page 2, line 29, change "to a" to --- to ---.

On page 3, line 21, change "provides" to --- provide ---.

On page 4, line 12, change "belt" to --- photoreceptor belt 10 ---.

On page 4, lines 15, 17, 18 and 20, after "belt" insert --- 10 ---.

On page 4, line 18, change "the toner" to --- toner ---.

On page 5, line 2, after "At" insert --- first ---.

On page 5, line 15, change "systems" to --- stations ---.

On page 5, line 16, after "toner" insert --- 31 ---.

On page 5, lines 20, 21 and 22, after "photoreceptor" insert --- belt 10 ---.

On page 5, line 23, before "development system" insert --- a ---.

On page 5, line 24, change "the electrode" to --- electrode ---.

On page 5, line 27, change "donor roll and photoconductive surface" to --- donor roll 40 and photoreceptor belt 10 ---.

On page 5, line 29, delete --- photoreceptor ---.

On page 5, line 32, change "76" to --- 31 ---.

On page 6, line 5, after "The" insert --- first ---.

On page 6, line 6, change "devices" to --- first and second recharging devices 36 and 37 ---.

On page 6, line 11, after "devices" insert --- 36 and 37 ---.

On page 6, line 13, after "device" insert --- 36 ---.

On page 6, line 14, before "recharging" insert --- first ---.

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On page 6, line 23, after "the second exposure station" insert --- 38 ---.

On page 6, line 32, after "station" insert --- E ---.

On page 6, line 33, after "station" insert --- C ---.

On page 7, lines 6 and 18, change "recharge" to --- recharging ---.

On page 7, line 8, after "device" insert --- 52 ---.

On page 7, line 11, after "station" insert --- 53 ---.

On page 7, line 13, change "38" to --- 53 ---.

On page 7, line 18, before "includes" insert --- H ---.

On page 7, line 22, after "station" insert --- H ---.

On page 7, line 24, after "station" insert --- 63 ---.

On page 8, line 2, after "sheet" insert --- 57 ---.

On page 8, line 2, after "station" insert --- J ---.

On page 8, line 5, before "sheet" insert --- support ---.

On page 8, line 7, change "52" to --- 57 ---.

On page 8, line 15, change "sheet support" to --- support sheet ---.

On page 8, line 16, change "sheets" to --- sheet ---.

On page 8, lines 25 and 27-30, reference numeral "38" is used to identify a development system, however, reference numeral "38" has been used previously to identify a second exposure station.

On page 8, line 26, change "a donor" to --- the donor ---.

On page 8, lines 28 and 29, before "system" insert --- development ---.

On page 8, line 29, change "the image" to --- an image ---.

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On page 8, line 31, change "a roller" to --- the donor roll ---.

On page 8, lines 31 and 32, change "structure" to --- roll ---.

On page 8, line 32, change "member" to --- photoreceptor belt ---.

On page 8, line 32, change "The" to --- A ---.

On page 8, line 33, after "donor" insert --- roll ---.

On page 9, line 2, change "member" to --- donor roll ---.

On page 9, line 3, delete --- an ---.

On page 9, lines 3 and 25, change "structure" to --- wires ---.

On page 9, line 8, change "structure" to --- roll 40 ---.

On page 9, line 8, after "core" insert --- 84 ---.

On page 9, line 10, before "auger" insert --- an ---.

On page 9, line 12, change "augers 76 have" to --- auger 76 has ---.

On page 9, line 14, change "The" to --- A ---.

On page 9, line 20, change "augers" to --- auger ---.

On page 9, lines 20 and 24, after "housing" insert --- 44 ---.

On page 9, line 27, change "structure" to --- roll ---.

On page 9, lines 27 and 29, after "wires" insert --- 42 ---.

On page 9, line 27, change "donor" to --- donor roll 40 ---.

On page 10, line 3, delete --- structure ---.

On page 10, line 8, after "sources" insert --- 103 and 104 ---.

On page 10, line 9, change "wire" to --- wires 42 ---.

On page 10, line 11, change "the AC" to --- an AC ---.

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On page 10, line 12, after "wires" insert --- 42 ---.

On page 10, line 13, after "roll" insert --- 40 ---.

On page 10, line 22, change "the power" to --- a power ---.

On page 10, line 23, change "the DC" to --- DC ---.

On page 10, line 25, change "the AC" to --- AC ---.

On page 10, line 31, change "electrodes" to --- electrode wires ---.

On page 10, line 32, change "magnetic brush roll" to --- magnetic brush ---.

On page 11, line 5, after "housing" insert --- 44 ---.

On page 11, line 5, after "photoreceptor" insert --- belt 10 ---.

On page 11, lines 6 and 16, after "roll" insert --- 46 ---.

On page 11, lines 7 and 15, after "roll" insert --- 40 ---.

On page 11, lines 7-8 and 23, after change "wire electrodes" to --- electrode wires 42 ---.

On page 11, line 15, change "surface" to --- belt 10 ---.

On page 11, line 18, change "the frequency" to --- a frequency ---.

On page 11, line 18, change "of the" to --- of a ---.

On page 11, line 19, change "oscillator215" to --- oscillator 215 ---.

On page 12, lines 3 and 4, after "donor" insert --- roll 40 ---.

On page 12, line 4, after "mag" insert --- roll 46 ---.

On page 12, line 4, change "electrode wire" to --- electrode wires 42 ---.

On page 12, line 11, after "oscillator" insert --- 215 ---.

On page 12, line 11, change "the mag" to --- a mag ---.

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On page 12, line 12, change "the donor" to --- a donor ---.

On page 12, line 12, change "the wire" to --- a wire ---.

On page 12, line 14, after "source" insert --- 225 ---.

On page 12, line 19, after "roll" insert --- 40 ---.

On page 12, line 23, change "wire electrode 42 is" to -- electrode wires 42 are --.

On page 12, line 24, change "source" to --- power supply ---.

On page 13, line 1, change "wire electrodes" to --- electrode wires ---.

On page 13, line 23, after "oscillator" insert --- 215 ---.

On page 13, line 23, delete --- wire ---.

On page 13, line 24, change "electrode" to --- electrode wires 42 ---.

On page 13, line 28, change "mag to donor to donor to wire" to --- mag roll 46 to donor roll 40 or donor roll 40 to electrode wires 42 ---.

On page 18, line 4, change "generating the" to --- generating ---.

On page 18, line 5, change "the voltage push-pull on the" to --- voltage push-pull on ---.

On page 18, line 5, change "increasing the" to --- increasing ---.

On page 18, line 6, change "for the" to --- for ---.

On page 18, line 7, change "wire electrode" to --- electrode wire ---.

On page 18, lines 7 and 8, change "at the" to --- at a ---.

On page 18, line 8, change "of the" to --- of ---.

On page 18, line 10, change "the wire electrodes" to --- electrode wires ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Folkins (European Patent Application 0 533 347 A2). Referring to Figure 3, a developer apparatus 38 (i.e., developer unit) is shown. The developer apparatus includes a donor roll 40 (i.e., donor member), spaced from a belt 10 (i.e., image receiving member), for transporting marking particles to a development zone adjacent the belt; and electrode wires 42 (i.e., electrode) positioned in the development zone between the belt and the donor roll. An asymmetrical voltage source 48 (i.e., voltage supply) electrically biases the electrode wires during a developing operation with at least an alternating current voltage and a direct current voltage to detach marking particles from the donor roll, forming a cloud of marking particles in the development zone, and developing a latent image with marking particles from the cloud. It is disclosed that the critical aspect of the voltage source is its asymmetry, so whether the underlying waveform to be skewed is a square wave (i.e., substantially square shapes) or a sine wave is not important.

Claims 3-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirsch et al. Referring to Figures 1 and 8, a printing machine having a development system 38

(i.e., developer unit) for developing a latent image recorded on a photoreceptor belt 10 (i.e., image receiving member) with marking particles, to form a developed image, the development system including: a donor roll 40 (i.e., donor member), spaced from the photoreceptor belt, for transporting marking particles to a development zone adjacent the photoreceptor belt; electrode wires 42 (i.e., electrode) positioned in the development zone between the photoreceptor belt and the donor roll; and a voltage supply for electrically biasing the electrode wires and the donor roll during a developing operation with an alternating current voltage and a direct current voltage to detach marking particles from the donor roll, forming a cloud of marking particles in the development zone, and developing the latent image with marking particles from the cloud; wherein the alternating current voltage for both the donor roll and the electrode wires are run at substantially the same frequency without phase shifts (See column 7, line 23 – column 8, line 2). For donor roll loading, a magnetic brush 46 (i.e., magnetic brush member) is used for depositing marking particles on the donor roll with the magnetic brush being connected to voltage sources as described by Hirsch et al (See column 7, line 23 – column 8, line 2).

Relevant Prior Art

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Folkins discloses a development unit having asymmetrically biased electrode wires.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Royer whose telephone number is (571) 272-2140. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William J. Royer
Primary Examiner
Art Unit 2852

wjr
December 7, 2005